

REMARKS OF LARRY JORGENSEN

May 2, 1977

Los Angeles Valley College
Historical Museum Association Meeting

Dodson: Mr. Larry Jorgensen will speak before the Los Angeles Valley College Historical Museum Association on the situation of water in the Los Angeles-San Fernando Valley. The date is May 2, 1977.

Jorgensen: ...worst drought in recorded history. Now, our records really only go back about a hundred years. Undoubtedly there's been worst droughts and of course 1977 isn't over yet, so noone knows. But if things keep going, it'll resurrect an old Western saying, which was "Steal my horse, carry off my wife, but don't touch my water."

[laughter]

What I'd like to do today is talk a little bit about the water and the drought. And then I... a couple of years ago did a series of a... did a study, a photographic study of the Owens Valley and of the reservoirs and the aqueduct and so on and so forth. I'll show you that when I'm through talking a little bit.

The Los Angeles basin, this whole area surrounding Los Angeles, is six percent of the area of the state of California. In terms of the natural stream flow, the amount of water that is here naturally.. from run offs from the hills and mountains and percolating up through the ground, we get six hundredths of one percent... six hundredth of one percent of all the water that is available to the state of California. Most of that of course flows to the Los Angeles River, and then from the various washes, like the Big and Little Tujunga and the Pacoima and others that flow into the Los Angeles River. But that's still only six hundredth of one percent of all of

the water that is in the state of California, that is flowing. We get approximately, on a good year, I mean the average year... we get two percent of the average of the annual rainfall that drops all over the state of California, that's basically two percent. Unfortunately, we have about 45% of the state's population in this area, with 2% of the rainfall. Which of course began in the 1880's with the influx of people for various reasons, into this area. And as we have built, and rebuild, and build some more, every time you build, needless to say, and you cover all the ground... the parking lot, the buildings, the drive ways, or what ever, you prevent water from percolating back into the ground water. Instead it runs off into sewers. Unfortunately, they do not have a way of reclaiming it, as yet. And so it simply goes out into the ocean. The rainfall data on this area is very instructive. The highest in record is 38 inches in one year, the lowest is 5. Anywhere since 7 to 15 is considered low, 8 is drought. Apparently that's what we're getting, 7 to 8 inches of rain. One of the earliest drought in record is during the 1860's, which wiped out many of the so-called Old California or Mexican Times [?] wiped out their cattle.. by not having enough water, you don't have enough feed for your cattle and the cattle die. A later one was in 1870's ...?... in the San Fernando Valley which wiped out the sheep farmings. I think we had the Lankershims and the Van Nuys and which forced them to switch to dry wheat farming, which did not require much water. In the 1890's, from 1894 to 1904, the average rainfall varied from 19 inches to 5 inches with too much of it being in the 5 inches. The amount of acreage being farmed out here in the valley dropped by 65%.

during that period. And of course that provided then, during 1904, the big impetus and motivation for going ahead and acquiring the water rights and for building the Owens Valley Aqueduct. One of the basic problems involved in all this, has to do with that when the city of Los Angeles was founded by the Spanish... and about five years after the founding, the city was granted under Spanish, later Mexican law, the water rights. And under Spanish and Mexican law, water rights include not only the river, but the water shed. That is all the underground streams and every thing else that feeds into that river. Under English common law, and under American law, water rights which are referred to as riparian rights means that everyone living along the river is entitled to some of the water. Or the water that is in the ground underneath them, if they own the land, they have the right to put a well down. Under Spanish law and then of course under Mexican law, and I might add then under the United States law which recognized the grant given to the pueblo of Los Angeles, this is not true. So the city of Los Angeles, the original pueblo, and then the city, owns all of the water in this entire basin. Now I know there's still litigations going on between the cities of Los Angeles and the cities of Burbank and the cities of San Fernando, who are drilling water, technically... I don't.. technically.. there's nothing... for the courts to decide, but apparently illegally, as they have been since their inception. And they have always managed to fight off the metropolitan water district bureaus.

During years of good rain, of high rainfall, like

in the late 1880's, is when all the trees were planted. For example, I went across, in 1888 50,000 residuous trees were planted in what is, what was then was then known as Lankershim, which is now North Hollywood. And this was non-irrigated land because the rainfall was ...?.... A few years later 6,000 more trees were planted. Many of those, of course, was fruit trees particularly peach and pears. And you know that Lankershim then became known as the pear city, the pear capital of the United States. Well, apricots too.

Well I have a photograph from 1901 that's over uh, what is now the corner of Lankershim and Chandler. And it says "Pear Capital of the World".... uhm, I wasn't here..

[laughter]

I understand there was a large number of pears and peaches... and apricots. I don't want to argue about which was most...

In researching this, I found the first court case involved with who owned the water, was litigated between the mission itself.. the Mission of San Fernando.. and the city of Los Angeles. In 1786, the mission dammed up an underground.. well, a spring that they found in what is now called North Hollywood. And they built a dam and begin using the water, hauling it back to irrigate their fields. And the officials of the city of Los Angeles came out and discovered it and eventually through their own courts forced them to stop that dam. They eventually gave them some water but the principle was

established the fact that it was theirs to give, that all of this water, here, belonged to the city. Even though this area at that time was not part of the city. In a Supreme Court case in the 1880's which validated.. the United States Supreme Court case.. which validated the city of Los Angeles the right to all this water. The case also report also beside it, that the city was not allowed to sell any water for agricultural purposes to anyone living outside of the city, which many of you know, then provide the impedance some years later for the San Fernando Valley as well as many other areas to become annexed to the city of Los Angeles. Even though the water is here, in the San Fernando Valley, for example in the ground, today there's about twenty.. a little over twenty wells owned by the Department of Water and Power. Most of which are at 900 feet level, pumping water out to the valley. Some wells are up to 1000 feet, they have to go down that far. The water cables can drop that far. But this water, even though it's in the San Fernando Valley legally belong to the city and if you wanted it, you have to be part of the city. Which is what happens when the city built the Owens Valley Aqueduct and brought the water into the San Fernando Valley, the people of San Fernando Valley wasn't entitled to use it or even buy it! Not to use it for free, but even to buy it, because they weren't within the city of Los Angeles and consequently the annexation procedure and process them through with the people required both in Los Angeles and San Fernando to vote for annexation. The uh.. interesting point. In 1904, wells, Artesian wells were providing 35% of that size used in the Los Angeles Basin. It's down to about 6% now. It's because of the dropping of the

water table. The dropping of the water table has created another problem with the Los Angeles Basin. And that is, as the water goes down the pressure from the ground drops and this creates a negative pressure which then allows the seawater to come in. So what is happening along the coast of the Los Angeles Basin is that ocean water is starting to seep in underneath because of the negative pressure. And it is now necessary for the Department of Water.. the Water Department.. the Department of Water and Power, to use some of this highly priced water to pump it into the ground in order to repressurize the ground water and the water table in order to keep the ocean water out, otherwise the beaches will be growing. As the salt water moves in, vegetation will die and we may have the beach... beach front property all the way up to Wilshire Boulevard.

[laughter]

...the Santa Monica freeway...

Yeah, the last big drought of record in the state of California was 1927 and 1934, but there were only 6 million people in the state at that time. This drought is apparently already exceeding that one. And there's now 21 million of people in the state of California. That drought plus the freeze back east, is estimated by some state economist is likely to cost the state of California anywhere from 3 to 7 billion dollars this next year or maybe the year after it. Most of that would be for agriculture. Agriculture in the state of California uses about 85% of all the water that is used in the state of California. It's been estimated that being anywhere

from 57,000 to 260,000 jobs are going to be ...?... in the next 24 months because of the drought. Anywhere from 57,000 to 260,000... noone knows, because noone knows how long the drought is going to continue. I spent a lot of time in Mendocino over Easter.... where they're putting in another well and laid pipes 120 yards to make sure we had enough water. And a guest at our place was the number two man of the East Bay, the San Francisco Bay area, of the water department. And he was telling me how they are now laying out pipes farther out into the Sacramento Delta, in order to get water. Their reservoirs are empty, completely empty. That even if it would start to rain today, it would be a year for them to have enough water. So they are already laying pipes all the way out into the San Francisco Harbor, the Bay area, all the way up to where the Sacramento River comes down, in order to get that Sacramento River water. However, because the snow has been so low and the snow pack in the Sierra is so low this year, there's not going to be much run-off from that snow. The Sacramento River is going to be very low. And that means that the first water pressure coming down is not going to be very great to push the salt water back out. Consequently, they are going to be pumping salt water into the city's water pumps. They know that and there's not a thing they can do about it except run in through a makeshift filtering system they can set up. This means that people with various health problems, for example I have a heart problem and I can't drink high sodium water, will have to switch to bottled water. In addition, as well as any other kinds of problems where sodium is.. where salt has an effect... This also means that industry, which is creating the biggest stir in the

Oakland area, their pipes.. many of which go back 50 years, and who knows what shape they're in... because who picks up the pipe until something goes wrong? uhm.. once the salt water hits it, with its corrosive effect, it could be very damaging to the industries in general in the Bay area. He told me that even if it started raining right now, it would take a year for the reservoir to fill up before they could just switch back to fresh water, in which time it would take them 5 to 7 years to completely clean out all the salt and sodium residual in those pipes... and there isn't a thing they could do! It doesn't do any good to complain, to write letters, it doesn't do any good to do anything! And even if it rained, it doesn't do any good right now. It's already too late. If it doesn't rain it'll be worse, of course, but the problem right now is already here and there isn't much you can do about it. This drought is also resurrecting many of the old battles, within the state of California, which many of us as historians thought was in the past. The water-logged northern counties that periodically flooded which do not flood anymore partly because of the dams and the reservoirs they reconstructed for the benefit of the south, and paid for largely by the taxpayers of the south, they now are suffering the drought. Yet they're watching their water and taking it to the south. You have battles between the Owens Valley, once again, and the city of Los Angeles. As I've indicated, it's in the courts. And the courts have to work out a compromise that is acceptable to either side. And you have battles between environmentalists and between those who want to construct more dams, in order to save more water. And you have battles between the state of California

and the Federal government, as well as between the State of California and the State of Arizona over the Colorado river. In Mendicino [. . sp ? .] where I spend a lot of time the average rainfall is 50 inches a year. Uh, that's Redwood country, it requires lots of rain they have Redwoods. Last year, uh, rainfall was 30 inches. This year, 15. Fifteen is drought. This means that, besides the fact that there is no water for sporting activities, the rivers are so low that the fish are dying because as the water gets low, not only isn't there enough room for the fish but there is also a warming factor which shallow waters warm up faster and these fish can't survive, uh, their adapted to a certain temperature. The Salmon industry is in great jeopardy, uh, the forest industry is in great jeopardy, the threat of forest fires this coming year has everyone incredibly frightened up there. Insurance companies are cancelling policies as soon as they expire. You can't get insurance up there. The state prison system which supplies most of the firefighters, in terms of raw numbers of people, have had to greatly expand their prison camps throughout northern California. Uh, that's some hazard because, uh, prisoners don't always get along too well with each other, and I taught at one of them last year so I know. Sometimes the class would be there and sometimes I would arrive and half the class had been sent back to [. . ? .] Uh, and these are the, these are the, most of the young men who do the fighting of forest fires. Los Angeles, uh to be more specific, normally gets 80 percent of its water from the Owens valley, and got about normally 5 percent from the Colorado, the rest from wells and from other sources. Because of cutbacks and because of shortages, and also because

the, there is not the runoff, there is not the snow in the Sierra's, without the snow there is not the runoff from the eastern slope of the Sierra's into the Owens valley and into the Owens aquaduct so we've had to switch and from now on we're going to start taking 20 percent of our water from the Colorado. Uh, the water from the Owens valley because of the engineering feat and the marvel that it was generally flows by gravity and then by siphon, there are no pumping stations required to pump that water. Uh, in a sense it's like it's free water. In fact, not only is it free, but also as it flows over certain high spots it turns dynamos and generators and provides electrical power. The Colorado river water, on the other hand, is not like that at all it has to be pumped. To run a pump you have to generate electricity first of all, that means you have to burn oil or something to generate the electrical power and that means that this water is many, many, times more expensive per acre foot than the Owens valley water. That is one reason, needless to say, that Los Angeles prefers the Owens valley water as opposed to the Colorado water. One last grim fact, uh, is that hydroelectric power, that is falling water from all these dams that we have and not just in Los Angeles but throughout the state, hydro-electric power normally constituts about 37 percent of all the electrical power that we in California use. Uh, it's estimated that about a third of that is all we're going to have this coming year because of how low the reserviors are. I was up in Tahoe a couple of weeks ago and Lake Tahoe is so low that it is not flowing anymore into the Truckee. So the Truckee is drying up. It feeds many rivers, one of which is the American, and it looks as if the American river may dry up.

Uh, the water is coming, the snow is melting but the pack is only about 10 percent of what it normally is and as that snow melts it is not coming down in forms of little creeks and streams and later, rivers, instead it's being absorbed by a very, very dry ground. And these are some of the suggestions that you should have heard, that we should cut all the trees and shrubs off the slope into the Owens Valley because those trees and shrubs are there and are absorbing water as it runs down. I personally am not in favor of that, I prefer going on a water conservation kick, if you will, uh the town of Salinas, no uh, Santa Cruz has had put upon them a 50 percent cutback. Every single household must now use 50 percent less than what they used last year at this time, and it's being vigorously enforced and there are fines for excessive use and after a certain number of penalties the water is cut off. Uh, I did some work last weekend, uh week-end before last with some friends of mine who live up there and I re-plumbed some of their piping, uh, you might think about this, it's not exactly legal, uh, but it's healthy, uh if your house is higher than your garden it works. If your house is lower than what you want to water it won't work. Disconnect the pipes from all your sinks, showers, and bathtubs, not your toilets. [laughter] Disconnect your pipes from your sinks, showers and bathtubs and pipe it through very inexpensive plastic pipes that are available and run that through your garden, as long as you use soap that is biodegradable of course. Uh, you'll have that water and in fact that soap is a healthy nutrient for your soil and for your plants, and for your vegetables. Uh, it's going to come to that unless it starts raining. It's one of those things you never know. No one knows.

There is an infinite number of theories, why does it happen? Everytime it happens there's an infinite number of theories and someone in that infinite number is right. But you never know until it happens which one is right. [laughter] It's like betting on a horse at the race track. What I'd like to do now is show you some slides that uh, a group of students and myself photographed. It's kind of like a photographic record, a contemporary one, of the Owens valley and the Owens valley aquaduct which provides 80 percent of the water to Los Angeles. Thank you.